

REMARKS

In reply to the Office Action dated June 21, 2005, Applicants have amended claims 18, 25, 29, and 30 to further clarify the claimed invention and added new claims 31-36 to protect additional aspects of the invention. As a result of this Amendment, claims 18-25 and 27-36 are currently pending.

Applicants appreciate the Examiner's indication that claim 25 is allowed. With respect to the other claims, however, the Examiner rejected claims 18-23 under 35 U.S.C. § 103(a) as being unpatentable over Goddard (U.S. Patent No. 6,129,209) in view of Webb et al. (U.S. Patent No. 4,971,477), as discussed on pages 2-3 of the Office Action. The Examiner also rejected claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Goddard in view of Manuli (U.S. Patent No. 6,460,897),¹ and further in view of Courant (European Patent No. 595742), for the reasons set forth on pages 3-4 of the Office Action. In addition, the Examiner rejected claims 27, 28, and 30 under 35 U.S.C. § 103(a) as being unpatentable over Goddard in view of Kutchke (U.S. Patent No. 4,049,480), according to the rationale discussed on pages 4-5 of the Office Action. Finally, the Examiner rejected claim 29 under 35 U.S.C. § 103(a) as being unpatentable over Goddard in view of Kesterman et al. (U.S. Patent No. 6,371,154), as discussed on pages 5-6 of the Office Action.

Goddard, Webb et al., Manuli, Kutchke, and Kesterman et al., however, fail to render the claimed invention unpatentable. Each of the claims recite specific

¹ Applicants respectfully believe that, due to a typographical error, the outstanding Office Action incorrectly identified this reference as "Webb ('897)" because no such reference exists in the file history, and the Office Action did not identify what this reference purportedly teaches.

combinations of features that distinguish the invention from the prior art in different ways. For example, independent claim 18 recites a combination that includes, among other things:

an annular band of reinforcing material disposed around the exterior surface of the female end at a position along the longitudinal axis thereof that is in general alignment with the sealing element, the reinforcing material having a substantially non-adjustable circumference arranged to prevent loss of sealing engagement between the female end and the sealing element during use of the pipe,

(amended claim 18, ll. 6-11). Independent claim 25 recites another combination that includes, for example,

a non-adjustable annular band of reinforcing material disposed around the exterior surface of the female end at a position along the longitudinal axis thereof that is in general alignment with the sealing element, the reinforcing material structurally configured to prevent loss of sealing engagement between the female end and the sealing element during use of the pipe,

(amended claim 25, ll. 6-10). Independent claim 29 recites yet another combination that includes, *inter alia*,

single piece of annular reinforcement material disposed around the exterior surface of the female end, the annular reinforcement material having a width that is greater than the width of the sealing element but is not substantially greater than a single corrugation, the annular reinforcement material being disposed substantially upstream from the sealing element and configured to maintain a substantially fixed circumference of the female end to resist loss of sealing engagement between the female end and the sealing element during use of the pipe,

(amended claim 29, ll. 7-14). And independent claim 30 recites a further combination that includes, for instance,

wherein the annular band of reinforcing material has a substantially fixed circumference to preclude the corrugated pipe, which normally expands outwardly when subjected to a predetermined level of interior pressure, from expanding outwardly at the site of the sealing element and losing sealing engagement between the female end and the sealing

element when the pipe is subjected to the predetermined level of interior pressure,

(amended claim 30, ll. 9-16). Finally, independent claim 32 recites a combination that includes, among other things:

a continuous ring disposed around the female end and having a substantially fixed circumference to maintain a seal between an outer surface of the gasket and an inner surface of the female end when the male and female ends are subjected to the predetermined level of internal pressure,

(new claim 32, ll. 7-10). At the very least, the applied references, whether taken alone or in combination, fail to disclose or suggest any of these exemplary features recited in independent claims 18, 25, 29, 30 and 32.

To make out a *prima facie* case of obviousness, the Examiner must demonstrate (1) that Goddard, as proposed to be modified by the teachings of Webb et al., Manuli, Courant, Kutchke, and Kesterman et al., discloses or suggests each and every feature recited in the claims, (2) that there is a reasonable probability of success of such modifications, and (3) the existence of some suggestion or motivation, either in the teachings of the applied references themselves or in the knowledge generally available to one of ordinary skill in the art, to make such modification so as to result in the claimed invention. See M.P.E.P. § 2143 (7th ed. 1998). It bears emphasizing that each of these requirements must be found in the prior art — not based on Applicant's own disclosure. See *id.*

Viewed against this backdrop, each of the Examiner's factual conclusions must be supported by "substantial evidence" in the documentary record. See *In re Lee*, 61 U.S.P.Q.2d 1430, 1432 (Fed. Cir 2002). The Examiner has the burden of documenting all findings of fact necessary to support a conclusion of anticipation or obviousness "less

the ‘haze of so-called expertise’ acquire insulation from accountability.” *Id.* To satisfy this burden, the Examiner must specifically identify where support is found within the prior art to meet the requirements of 35 U.S.C. § 103. In this case, however, the Examiner has failed to satisfy his burden of demonstrating how Goddard, taken alone or in combination with any other reference, can render obvious each and every one of the limitations present in independent claims 18, 25, 29, 30 and 32, as required by the Manual of Patent Examining Procedure (“MPEP”) and Federal Circuit jurisprudence.

Generally speaking, Goddard discloses a pipe having an in-line bell. See Abstract. As the Examiner admits, however, Goddard fails to provide any disclosure of an annular band or reinforcement, as recited in greater detail in the independent claims. Goddard thus cannot render any of the claims unpatentable.

Moreover, Webb et al. cannot remedy the deficiencies of Goddard. Webb et al. fails to disclose or suggest “an annular band of reinforcing material” that has “a substantially non-adjustable circumference” or a “substantially fixed circumference,” as recited in independent claims 18 and 30. Nor does Webb et al. disclose or suggest a “non-adjustable” annular band of reinforcing material, as specifically called for by independent claim 25. And Webb et al. also fails to disclose or suggest a “single piece of annular reinforcement material” that is “configured to maintain a substantially fixed circumference of the female end,” as stated in independent claim 29. Webb et al. further fails to disclose or suggest a “continuous ring . . . having a substantially fixed circumference,” as recited in independent claim 32. Instead, Webb et al. teaches away from the claimed invention by disclosing, as shown in Fig. 8, the use of a screw type hose clamp 98, 99. As Webb et al. explains:

Circular metal bands 98 are placed about the annular cuff section 82. They have screw tightening lug assemblies 99, which can be tightened to bring the bands into pressure engagement with the annular cuff section 82, thus tightening it against the resilient sleeve 95,

Col. 6, ll. 30-35. Consequently, Webb et al. not only fails to disclose or suggest the missing features of Goddard, as required by 35 U.S.C. § 103, but it also teaches away from the claimed invention.

Similarly, Kesterman fails to make up for the inadequacies of Goddard. Like the hose clamp of Webb et al., Kesterman discloses, as shown in Figs. 6A-C, 14, and 15, the use of a hose clamp 100 for holding a two pieced clasp 80 together. By contrast, independent claims 18 and 30 recite “an annular band of reinforcing material” that has “a substantially non-adjustable circumference.” Independent claim 25 specifically calls for a “non-adjustable” annular band of reinforcing material. Independent claim 29 further requires a “single piece of annular reinforcement material” that is “configured to maintain a substantially fixed circumference of the female end.” And independent claim 32 recites a “continuous ring . . . having a substantially fixed circumference.” Kesterman fails to disclose or suggest any of these features, as required by 35 U.S.C. § 103. Accordingly, Kesterman not only fails to supply the missing features of Goddard, but also teaches away from the claimed invention.

Moreover, Kutschke fails to overcome the shortcomings of Goddard, Webb et al., and Kesterman. Kutschke discloses a method and apparatus for forming a joint between two abutting ends of conduit liners. See Abstract. Kutschke, however, fails to disclose or suggest the following features of the independent claims:

- an “annular band of reinforcing material” that has a “substantially non-adjustable circumference arranged to prevent loss of sealing engagement between the female end and the sealing element,” as recited in independent claim 18;

- an “annular band of reinforcing material” that is “structurally configured to prevent loss of sealing of sealing engagement between the female end and the sealing element,” as called for by independent claim 25;
- a “single piece of annular reinforcement material” that is “configured to maintain a substantially fixed circumference of the female end,” as stated in independent claim 29;
- an “annular band of reinforcing material” that has a “substantially fixed circumference to preclude the corrugated pipe . . . from expanding outwardly at the site of the sealing element and losing sealing engagement between the female end and the sealing element,” as recited in independent claim 30; and
- a “continuous ring . . . having a substantially fixed circumference to maintain a seal between an outer surface of the gasket and an inner surface of the female end,” as recited in new independent claim 32.

Instead, Kutschke teaches away from the claimed invention by disclosing, as shown in Figs. 2-5, the use of a sleeve 30, adhesive tape 47, and a gasket 50 to create an annular space 44 for receiving foam material 48. Contrary to the Examiner’s characterization, the adhesive tape 47 is not configured to maintain any sealing engagement between the two abutting ends 24, 26 disclosed in Kutschke, let alone between the claimed male and female ends of a pipe. The adhesive tape 47 of Kutschke thus cannot constitute either the “annular band of reinforcing material” of independent claims 18, 25, and 30, the “single piece of annular reinforcement material” of independent claim 29, or the “continuous ring” of independent claim 32. As a result, Kutschke also fails to render the claimed invention unpatentable, whether taken alone or in combination with any other reference.

Turning to dependent claim 24, Courant undeniably fails to supply the shortcomings of the applied references. For example, the Examiner relies upon Courant solely for allegedly teaching the existence of a pipe having an intermediate corrugation (23a) that has an outside diameter greater than the outside diameter of a

male end.” Office Action at 3-4. Modifying Goddard, Webb et al., Kesterman, and/or Kutschke with the teachings of Courant thus would certainly fail to result in the claimed invention.

For at least these reasons, Goddard, Webb et al., Kesterman, and Kutschke all fail to disclose or render obvious each and every element recited in independent claims 18, 25, 29, 30, and 32. In addition, claims 19-24, 27-28, 31, and 33-36, which all depend upon one of the independent claims, respectively, recite additional features that are neither disclosed nor suggested by each of the applied references, taken either alone or in combination. Thus, each of the dependent claims are allowable for at least the same reasons discussed above with respect to the independent claims.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of all the pending claims 18-25 and 27-36. Should it be necessary to resolve any additional concerns and expedite the issuance of a Notice of Allowance, the Examiner is invited to contact Applicants’ representative at (202) 408-6052.

Please grant any extension of time to the extent required to enter this response and charge any fees required to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

By: 

Christopher W. Day
Registration No. 43,944

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